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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,929	09/05/2006	Harald Hofmann	502902-248PUS	5399

7590 07/31/2009  
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EXAMINER
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SHALLENBERGER, JULIE A

ART UNIT	PAPER NUMBER
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2885

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,929	<b>Applicant(s)</b> HOFMANN, HARALD	
	<b>Examiner</b> JULIE A. SHALLENBERGER	<b>Art Unit</b> 2885	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/5/06 &amp; 2/2/09</u>                                       | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

The preliminary amendment filed 9/5/06 has been entered.

### ***Claim Objections***

Claim **15** is objected to because the language "and/or" makes it unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim **16** is objected to because the language "in particular" makes it unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **1-7, 12-21, and 23-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang (2002/013025).

In regard to claim 1, Zhang teaches a lamp comprising at least one base 12/15 for connection to a luminaire, having a curved, essentially rotationally symmetrical reflector 11, a light source 20 being arranged in the focal point or focal point region of

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said reflector for the purpose of producing a directional, light distribution of the lamp, the reflector having a reflector opening which provides a light exit plane (E) of the lamp (see figure 2), and the light source being arranged spaced apart from the inside of the reflector, and wherein at least one functional element 311, 312 of the lamp at least partially extends essentially along the light exit plane or is arranged at least partially on that side of the light exit plane which faces away from the reflector (see figure 2) [0025-0037], but Zhang lacks the teaching of the source being formed by at least one LED in this particular embodiment.

However, Zhang teaches that LEDs are known in the art for various lighting applications and it would have been obvious to one of ordinary skill in the art at the time the invention was made to use LEDs in order to reduce the intensity and/or power consumption for various lighting applications (ie vehicle room lighting or small area lighting needs). One would have been motivated since LEDs are recognized in the illumination art to have many desirable advantages, including reduced size, high efficiency, low power consumption, long life, resistance to vibrations, and low heat production, over other light sources.

In regard to claim 2, Zhang teaches the functional element protrudes at least partially out of the reflector opening (see figure 2) [0033].

In regard to claim 3, Zhang teaches the light source has at least one associated voltage supply line which extends essentially along the light exit plane (see figure 2) [0033].

In regard to claim 4, Zhang teaches two voltage supply lines are provided for the LED which extend essentially diametrically with respect to one another (figure 1)[0025].

In regard to claim 5, Zhang teaches three voltage supply lines for the light source, are provided, of which in each case two enclose an angle of approximately 120° along the light exit plane (see figure 7 – 312, 314, 316).

In regard to claim 6, Zhang teaches four voltage supply lines 311-314 for the light source are provided of which in each case two enclose an angle of approximately 90° along the light exit plane (see figure 5)[0039].

In regard to claim 7, Zhang teaches one of the at least one voltage supply line is provided which engages around one edge of the reflector opening (figure 2)[0029].

In regard to claim 12, Zhang teaches a grip part 321,322,302 is provided on that side of the light exit plane which faces away from the reflector [0037].

In regard to claims 13-15, Zhang teaches the light source has at least one associated heat sink 311,312A for heat dissipation purposes and wherein the heat sink is spaced apart from the apex of the reflector and it is arranged on that side of the light exit plane and/or light source which faces away from the reflector [0037-0038].

In regard to claims 16-19, Zhang teaches that the heat sink has a compact as recited in claim 16 wherein the cooling block is arranged essentially in the region of a longitudinal center axis of the reflector as recited in claim 17 (figure 4 shows a portion of the heat sink arranged essentially in the longitudinal center of the reflector), wherein the heat sink heat sink comprises a cooling plate which extends essentially along the light exit plane as recited in claim 18, and wherein the cooling plate extends from the light

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essentially up to one edge of the reflector opening(see figures 2 and 4) as recited in claim 19 [0037-0038].

In regard to claims 20 and 21, Zhang teaches that the reflector is essentially continuous and free of apertures in the region of its apex (see figure 2) [0028].

In regard to claim 23, the light distribution of Zhang (as described above) would produce narrowly emitted light since the light is limited by the supporting walls and also because LEDs have a smaller emission angle.

In regard to claim 24, Zhang teaches that the functional element of the light source 311A, 312A which at least partially extends essentially along the light exit plane or is arranged at least partially on that side of the light exit plane which faces away from the reflector is at least one voltage supply line of the light source and/or at least one heat sink 311A,312A for the light source.

In regard to claims 25, Zhang teaches the three voltage supply lines are for a light source unit having at least two luminary elements.

In regard to claim 26, Zhang teaches four voltage supply lines are for light source unit having at least three luminary elements.

The regard to the light source unit having LEDs, Zhang modified above (with regard to claim 1) addresses that LEDs would have been obvious to one of ordinary skill in the art at the time the invention was made and it would have been obvious to include multiple LEDs for the purpose of providing different colored light and various lighting effects as desired for particular design applications.

Claims **8-11 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang in view of Kai (2002/0158579).

In regard to claim 8, Zhang teaches the invention described above, but lacks the teaching of a transparent cover element associated with the reflector and closing the reflector opening.

Kai teaches a transparent cover element 12 associated with the reflector and closing the reflector opening [0095].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a cover element as taught by Kai in Zhang device in order to provide protection for the light source. One would have been motivated to use a cover element in order to prevent ingress, dust, debris or other elements that may effect the functionality of the lighting device.

In regard to claim 9, the cover of Kai is essentially in the form of a circular disk (figure 5) [0078].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a cover element as taught by Kai in Zhang device in order to provide protection for the light source. One would have been motivated to use a cover element in order to prevent ingress, dust, debris or other elements that may effect the functionality of the lighting device.

In regard to claim 10, Kai teaches the cover element has a central opening for accommodating a light source.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a cover element as taught by Kai in Zhang device in order to provide protection for the light source. One would have been motivated to use a cover element in order to prevent ingress, dust, debris or other elements that may effect the functionality of the lighting device.

In regard to claim 11, Zhang teaches one voltage supply line and Kai teaches a cover element. With regard to the voltage supply lines being provided on a side of the cover element which faces away from the reflector, such an arrangement would be obvious to one of ordinary skill in the art in order to maximize the heat dissipation.

In regard to claim 22, Zhang teaches the invention described above, but lacks the teaching of a parabolic reflector.

Kai teaches a parabolic reflector [0099].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a parabolic reflector in order to focus the light as desired for particular light applications and needs. One would have been motivated to use a parabolic reflector in order to concentrate the light on a desired target area.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Keller (2002/0191398) teaches a similar lighting device.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to JULIE A. SHALLENBERGER whose telephone number is (571)272-7131. The examiner can normally be reached on Monday - Friday 830-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon-Suk (James) Lee can be reached on 571-272-7044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAS  
7/9/09

/Jacob Y Choi/  
Primary Examiner, Art Unit 2885